

B202/B178/B180 Product Support Guide

Introduction

Launch Date: 06/2005

S/N Configuration: K52/K50/K51

Product Code: B202/B178/B180

Product Code	Gestetner	Lanier	Ricoh	Savin
B202	DSc428	LD328c	Aficio 3228C	C2824
B178	DSc435	LD335c	Aficio 3235C	C3528
B180	DSc445	LD345c	Aficio 3245C	C4535

Training Information:

Technical Professionals currently certified on the B147/B149 will be automatically certified on the B202/B178/B180 upon receipt and review of the *B202/B178/B180 Service Documentation Update Pack*

Training Prerequisites:

All technicians attempting this program must be certified on the B147/B149.

Documentation

Description	EDP Code
Service Documentation Update Package	002365MIU
Service Manual	002366MIU
Parts Catalog	002367MIU

If you have any questions regarding this or any other training, please contact the Service Education and Development Division at (973) 882-5797.

Product Concept:

The B202/B178/B180 is the successor to the B147/B149 color copier.

When compared to the B147/B149, the B202/B178/B180 now offers improved print quality using new polymerized toner, a print controller CPU with a clock rate of 600MHz (533MHz B147/B149), 1,024MB of RAM standard (512MB B147/B149), and improved maintenance with an oil-less fusing unit.

Copy Speed:

B202 BW 28ppm, FC 24ppm

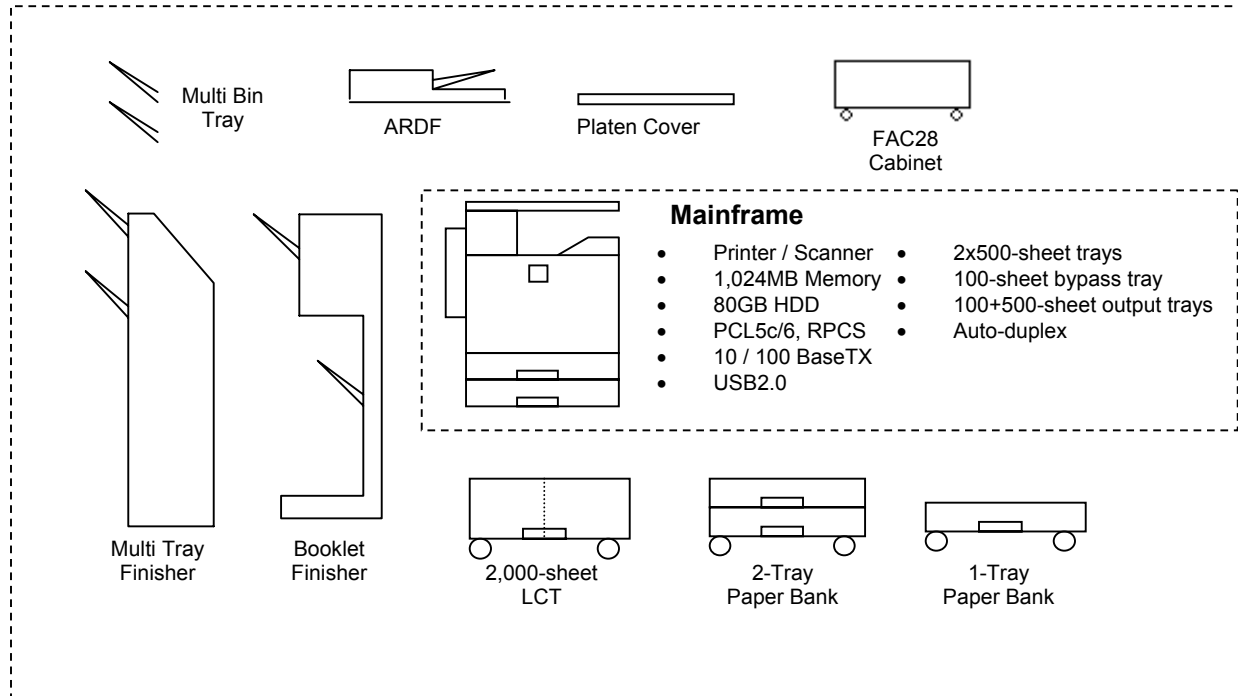
B178 BW 35ppm, FC 28ppm

B180 BW 45ppm, FC 35ppm



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Machine Configuration



	Item	Product Code
Copier	Mainframe	B202/B178/ B180
	ARDF	Standard
	Platen Cover	Type 3800
	Multi Bin Tray	PT460
	Multi Tray Finisher	SR960
	Booklet Finisher	SR950
	2000 Sheet LCT	PS600
	2 Tray Paper Bank	PS590
	1 Tray Paper Bank	PS580
	Cabinet	FAC28

	Item	Product Code
Fax	Fax Option	B712
	Optional G3 Line	-
	Memory Unit Type B 32MB	-
Printer	IEEE 1284 Type A	B679
	IEEE 1394 Type B	B581
	Wireless Lan Option Type H	G813
	Bluetooth Option Type 3245	B736
	PostScript 3 Unit Type 3245	-
	USB	Standard
Other	HDD Data Overwrite Security Unit Type D	-
	Scanner Accessibility Option	-
	MLB2 (File Format Converter	-

Option Compatibility

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1. Platen Cover	X																						
2. ARDF		X																					
3. 1-Tray Paper Bank			X	X																			
4. 2-Tray Paper Bank			X	X																			
5. LCT			X	X																			
6. Multi Bin Tray						X	X																
7. Multi Tray Finisher			E	E	E	X	X																
8. Booklet Finisher			E	E	E	X	X																
9. Fax Unit																							
10. Fax G3 Option									M														
11. Fax SAF Memory									M														
12. Hand Set									M														
13. Fax Stamp Ink			M						M														
14. PostScript3																							
15. IEEE1284															X	X	X						
16. IEEE1394														X	X	X	X						
17. Wireless LAN														X	X	X	X						
18. Bluetooth														X	X	X	X						
19. Media Link Board 2																							
20. PI Board																							
21. Key Counter Bracket																							
22. HDD Data Overwrite Security Unit																							
23. Scanner Accessibility Option																							

X: Cannot be installed together

M: Must be installed together

E: Either paper feeding option is in need with finisher

Non Recommended Paper

- Paper meant for an inkjet printer
- Bent, folded or creased paper
- Curled or twisted paper
- Torn paper
- Wrinkled paper
- Damp paper
- Paper that is dry enough to emit static electricity
- Special paper, such as thermal paper, aluminum foil, carbon paper and conductive paper
- Paper whose weight is heavier or lighter than the specification
- Paper or envelopes with windows, holes, perforations, cutouts, or embossing
- Label paper on which glue or the base paper is exposed
- Paper with clips or staples

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Recommended Paper

Plain Paper

Type	Brand	WT.	Size	Recommended Settings (Machine and Printer Driver)
Plain	Hammermill Copy Plus	20 lb. Bond	8.5" x 11" 8.5"x14" 11"x17"	NA
	Champion Multi Purpose	20 lb. Bond	8.5" x 11" 8.5"x14" 11"x17"	NA
	Spectrum DP	20 lb. Bond	8.5" x 11" 8.5"x14" 11"x17"	NA
	X4024	20 lb. Bond	8.5" x 11" 8.5"x14" 11"x17"	NA
	Hammermill Color Copy	28 lb. Bond	8.5" x 11" 8.5"x14" 11"x17" 12"x18"	NA

Special Paper

Paper Type	Brand/Type/#	WT.	Size	Recommended Settings
Glossy Paper <Primary Recommendation>	Great White Laser Glossy Photo Paper [Brightness 94] (# 86300)	32 lb. Bond	8.5" x 11"	Bypass Tray / Thick Paper (*1)
Glossy Paper <Secondary Recommendation>	Hammermill Color Copy Gloss [Brightness 90] (# 5502-0)	32 lb. Bond	8.5" x 11"	Bypass Tray / Thick Paper (*1)
	Wausau Exact Gloss Coated (# 97201)	80 lb. Text	Size: 8.5" x 11"	Bypass Tray / Thick Paper (*1)
Coated Matte Paper	Wausau Exact Matte Coated (# 99201)	80 lb. Text	Size: 8.5" x 11"	Bypass Tray / Thick Paper (*4)
Adhesive Label *2	Avery White Mailing Labels (# 05160)	X	Size: 8.5" x 11"	Bypass Tray / Thick Paper
	Avery White Mailing Labels (# 05163)	X	Size: 8.5" x 11"	Bypass Tray / Thick Paper

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Transparency	3M CG3700	X	Size: 8.5" x 11"	Bypass Tray / OHP
	3M CG3720	X	Size: 8.5" x 11"	Bypass Tray / OHP
Recycled Paper	Georgia Pacific GeoCycle 30% Recycled	20 lb. Bond	Size: 8.5" x 11"	Bypass Tray / Plain Paper
Envelopes *3	Quality Park Business Envelope (qua11184)	X	COM10	Bypass Tray / Thick Paper/Flap Closed
	Westvaco Laser Quality Envelopes C0125	X	COM10	Bypass Tray / Thick Paper/Flap Closed

Note: See additional comments page after next.

*1. Limitation: Magenta jitter at 67mm, cyan jitter at 165mm and black jitter at 35 mm from trailing edge. This can be improved by adjusting the registration roller speed.

<Procedure>

Adjust the registration roller speed depending on the paper type and/or mode selected.

SP1-004-4: Normal paper (1200 dpi)

SP1-004-5: Normal paper (600 dpi)

SP1-005-3: Think paper (1200 dpi)

If SP1-005-3 cannot improve the level even when setting it to "-1.0", follow the procedure below.

Set SP1-005-3 to "-1.0".

Print the samples by adjusting SP1-004-4 from 100% (-0.2% to -0.8%).

After adjusting SP1-004-4, check the image quality also with normal paper in the 1200 dpi mode.

Readjust it so that the image quality level is acceptable for both thick and normal paper if necessary.

*2. Labels should not have any exposed glue or base paper. (Die cuts should not penetrate the liner sheet.)

*3. The multiple layers used in envelope construction might result in lower toner density or wrinkles.

*4. Limitation: White dots caused by poor transfer.

Out Of Specification Paper Tested

Thick Paper	Eastern Paper, Pristine High Yield Index (#081-01930)	110 lb. Index	Size: 8.5" x 11"	Bypass Tray / Thick Paper (*1) / (*2)
	Hammermill, Color Copy Cover	60lb. Cover	Size: 8.5" x 11"	Bypass Tray / Thick Paper

Note: See Additional Comments Below

*1. Limitation: Magenta jitter at 67mm, cyan jitter at 165mm and black jitter at 35mm from the trailing edge. The level can be improved by adjusting the registration roller speed.

<Procedure>

Adjust the registration roller speed depending on the paper types and/or mode selected.

SP1-004-4: Normal paper (1200 dpi)

SP1-004-5: Normal paper (600 dpi)

SP1-005-3: Thick paper (1200 dpi)

If SP1-005-3 cannot improve the level even when setting it to "-1.0", follow the procedure below.

Set SP1-005-3 to "-1.0".

Print the samples by adjusting SP1-004-4 from 100% (-0.2% to -0.8%).

After adjusting SP1-004-4, check the image quality also with normal paper in the 1200 dpi mode.

Readjust it so that the image quality level is acceptable for both thick and normal paper if necessary.

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*2. Limitation: Magenta jitter at 74mm, yellow jitter at 203mm and black jitter at 105mm from the leading edge. The level can sometimes be improved by loading the paper in the tray upside-down.

Recommended Printer driver settings for various Throughput Materials:

Paper Type Used	Driver Setting
Thick Paper	Thick
Labels	Thick
Card Stock	Thick
Envelope	Thick
28 lb. Plain Paper	Plain Select "Special" only when you find insufficient toner fusing.
Transparency	OHP Transparency

Other paper types (color, preprinted, recycled and letterhead) at the printer driver cannot be interpreted to change the machine settings according to the type of paper selected. They are used only to lock the paper tray and to prevent designated papers from being automatically selected.

Additional Comments

Ricoh tested the above papers, however, **Ricoh recommends that end users test any paper before purchasing large quantities.** The print quality may be different than expected according to the temperature, humidity and printing applications in which the paper is used. In addition, specifications of the paper may be subject to change, over which Ricoh has no control.

When using special paper:

- Feed from the bypass tray
- Select the proper paper type from the printer driver

Whenever printing from the bypass tray:

- Paper will be fed out to the face-up external tray.
- Printing numerous sheets of special paper in a short amount of time might create some printing problems.
- Exclusive printing of special paper may result in more frequent service calls, and may significantly reduce the maximum yield of maintenance kits. The projected reliability target assumes occasional use of special paper.

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New Features

- **High Productivity**
 - Print/Copy speed (BW/FC): B178 45/35ppm, B180 35/28ppm, B202 28/24ppm
 - 1st Print/Copy speed (BW/FC): B180 6/8 sec.
 - Warm-up Time: Less than 99 sec.
- **High Image Quality**
 - The new toner maximizes the level of image quality achieved in copying and printing.
- **Security feature: Windows Authentication**
 - Authenticates an individual user by utilizing the existing Windows network username / password.
 - No one without a valid username / password can access to the machine.
- **Color Usage Restriction (by Windows Auth.)**
 - In addition to security measure, Windows Authentication limit groups in domain to use BW / Full Color copy.
- **HDD data protection: DataOverwriteSecurity option**
 - It eliminates the risk of unauthorized access to the information remaining on HDD of the machine.
- **Enhanced Fax Features**
 - Forwarding inbound faxes to Folder
 - LAN-Fax result by E-mail (Not required User Code)
 - IP Fax
- **Environmental Friendly**
 - Abolished environmental sensitive materials. (Lead, Chromium, PVC, Cadmium free) in compliance with EU RoHS directive. (RoHS: Restriction of Hazardous Substances, effective from July 2006).
- **Serviceability Improvement**
 - Due to no need of Oil Supply Unit, B202/B178/B180 PM interval will be longer than 20K prints

Major Improvements

		B202/B178/B202
General Spec.	Copy / Print Speed (A4/LT LEF)	B202: BW 28ppm, FC 24ppm B178: BW 35ppm, FC 28ppm B180: BW 45ppm, FC 35ppm
	Warm-up Time	Less than 99 sec.
	1 st Copy / Print Speed	B202/B178: BW 8 sec., FC 10 sec. B180: BW 6 sec., FC 8 sec.
Scanner Features	Scanning Speed (A4/LT LEF, Scan to E-mail)	BW 50ppm, FC 35ppm
	Registered LDAP server	Up to 5
Fax Features	Forwarding inbound faxes to Folder	Yes
	LAN-Fax result by E-mail	Yes
	IP fax	Yes
	I-fax T.37	Yes, Full Mode
Security	Windows Auth.	Yes
	HDD data Overwrite	Copier, Printer, Scanner, Document server data
Environment	Environmental Sensitive Materials	Lead, Chromium, PVC, Cadmium free
Serviceability	PM interval	B178/B180 60K Print, B202 52K Prints(Longer than 20K Print of J-C1)

Security Features

Security feature: Windows Authentication:

- Eliminate unauthorized usage of the machine.
- Utilize existing Windows network login infrastructure.
- Eliminate "From" field spoofing. (*)
- IT manager: No additional login-password system to register.
- General users: No additional password to remember.
- (*) Eliminate "From" field spoofing ("Active Directory") is required for this operation. Once the login information is authenticated, scanner application (Scan to E-mail) is available. The authenticated Username automatically goes to "Sender's Name" field and cannot be changed.

Color Usage Restriction (by Windows Auth.):

- Notes: "Active Directory" is standard option of Windows NT 2000 server or later, but it is necessary to install separately.
- Utilizes existing Windows network login infrastructure. This access control feature (by application and by color mode) is similar to User Code. But, this time no additional dedicated username and password is required. It is possible to authenticate an individual user by utilizing the existing Windows network username and password that are already used in Login for their PC.

HDD data protection Data Overwrite Security System (DOSS) option:

- Eliminate the risk of unauthorized access to the information remaining on HDD of the machine.
- The DOSS solution was designed to provide customers that have requirements for document security while using digital copiers an easy to use and implement hard drive latent data security solution
- The DOSS solution was designed to help sell more mainframes by adding a security solution for classified documents handling applications.

Authentication for Administrator and User:

- To control administrators' and users' access to the machine, B202/B178/B180 provides Administrator Authentication and User authentication. Login username and login password inputting is required in both authentications.

Encryption:

Communication Path by SSL (Secure Socket Layer)

- When accessing to the machine using a Web browser, IPP, or Smart Device Monitor for Admin, it is possible to establish encrypted communication by using Secure Socket Layer (SSL).

SNMPv3 Encrypted Communication:

- It is possible to realize encrypted communication via SNMPv3 when making machine setting by Smart Device Monitor for Admin.

Permit Settings by SNMP V1 and V2:

- When the machine is accessed by using the SNMPV1,V2 protocol, authentication cannot be performed. So there is a possibility that administrator settings such as the paper setting to be changed. If you select [Off], the setting can be viewed but not specified with SNMPV1, V2.

Encrypt Address Book:

- Even if hard disk drive is removed, disposed of or stolen, the data in the address book is protected by encryption and cannot be read

Driver Encryption Key:

- By setting same encryption key both for machine and users' printer drivers, it is possible to encrypt login password.

PDF Password:

- By setting same password both for machine and Desktop Binder Lite, it is possible to encrypt password for PDF files when using PDF Direct Print function.

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Permit Simple Encryption:

- Under Windows 95/98/Me, advanced encryption is not possible with the printer driver or TWAIN driver, so simple encryption is used. If selecting [Off] in this function, printing with simple encryption is not allowed and users cannot connect using the printer driver or TWAIN driver under Windows 95/98/Me.

Permit Display of User Information:

- By this setting, when checking the job history via network without any authentication, all personal information can be displayed as "*****". For example, when someone not authenticated as an administrator checks the job history using SNMP in Smart Device Monitor for Admin, personal information can be displayed as "*****" so users cannot be identified.

Prevent Stored Documents from Unauthorized Access

Specify the users and their Access Permission(Access Level) for each stored file.

Specify the users and their Access Permission(Access Level) for user's stored file

- Prevent stored files from unauthorized access.

Password for the stored files

Enhance File Protection

- Prevent stored files from unauthorized access.
- This makes the management of access permissions easier than it is when permission is specified for each stored file.
- Set the password for each stored file to prevent from unauthorized access to that.
- Files are locked and become inaccessible if an invalid password is entered ten times. This can protect the files from attacks in which passwords are entered without authority.
- Since it is impossible to view any information of registered users, it is possible to protect leaking the registered information to unspecified users.

Permit Display of User Information

Prevent Data Leaks caused by Unauthorized Transmission

Specify the users who can use scanner function

Restrict Use of Destinations

Permit Adding of Destinations

- Can limit the users who are allowed to send files, and prevent unauthorized usage of scanner function.
- Can limit the direct entry of destinations to prevent files from being sent to destinations not registered in the address book.
- Prevent the registration of addresses that are not managed by the administrator.

Conventional Security Features

Locked Print

- A printed document may be viewable by other people in certain cases, such as the machine being a long way from the user's desk. By using this function, users can print the documents from the control panel and take them immediately, preventing others from viewing them.
- Specify whether to enable or disable the function for each protocol
- When the machine is accessed by using the SNMPV1,V2 protocol, authentication cannot be performed. So there is a possibility that administrator settings such as the paper setting to be changed. If you select [Off], the setting can be viewed but not specified with SNMPV1,V2.

Effective Protocol

Permit Settings by SNMP V1 and V2

- By this setting, administrator can limit users' access permission to the machine's settings. The machine's System Settings menu and the printer's regular menus can be locked so that they cannot be changed.

Menu Protection

IPP Authentication:

- Specify the IPP password for the machine using Web Image Monitor. Select the authentication method from the following three

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authentication methods.

1. **Disable: No restriction for accessing the machine by using IPP.**
2. Basic: When accessing to machine by using IPP, User name and Password inputting is required. However, Username and password is not encrypted
3. Digest: When accessing to machine by using IPP, Username and password inputting is required. In addition username and password is encrypted.

Fax Option Features

- **New feature:**
 - Forwarding inbound faxes to Folder
 - Lan-Fax results by E-mail (User Code not required)
 - IP Fax T.38

- **General Fax Features**

Compression method:	MH, MR, MMR, JBIG	
Scanning speed:	0.86sec. (A4/LT SEF, Any mode)	
Number of Pages Scanned: (ARDF)	A4/LT SEF	Standard mode: 30pages/minute Detail mode: 30pages/minute Super Fine mode: 30pages/minute
	A4/LT LEF / image rotation	Standard mode: 35pages/minute Detail mode: 35pages/minute Super Fine mode: 27pages/minute
SAF Memory size:	Standard	4MB
	With Optional SAF Memory	28MB

- **Internet Fax (by email) Features**

Network:	LAN: Local Area Network Ethernet/10Base-T, 100Base-TX, IEEE1394 (IP over 1394), IEEE802.11b (Wireless LAN)
Transmit function:	E-mail
Scan line density:	200x100 dpi (standard character), 200x200 dpi (detail character), 200x400 dpi (fine character, optional, *1), 400x400dpi (super fine character, optional, *1)
Original size: Scanning width	A3 (*1), B4 (*1), A4
Communication protocols:	Transmission: SMTP, TCP/IP Reception: POP3, SMTP, IMAP4, TCP/IP
E-mail format:	Single/Multi-part, MIME conversion Attached file forms: TIFF-F (MH, MR (*1), MMR (*1) compression)
Authentication method:	SMTP-AUTH, POP before SMTP, A-POP

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Internet communication:	Send and receive E-mail with a computer that has an E-mail address.
E-mail send functions:	Automatic conversion of sent documents to E-mail format and E-mail transmission. Memory transmission only.
E-mail receive functions:	Automatic detection and printing of appended TIFF-F files and ASCII text. Memory reception only.

*1: Full mode

• IP-Fax Features

Network:	LAN: Local Area Network Ethernet/10Base-T, 100Base-TX, IEEE1394 (IP over 1394), IEEE802.11b (Wireless LAN)
Scan line density:	8x3.85 lines/mm, 200x100 dpi (standard character), 8x7.7 lines/mm, 200x200 dpi (detail character), 8x15.4 lines/mm, 200x400 dpi (fine character), 16x15.4 lines/mm, 400x400dpi (super fine character)
Original size:	Maximum A3 or 11"x17" (DLT)
Maximum scanning size:	Standard size: A3, 297mm x 432mm, Irregular size 297 x 1200mm
Transmission protocols:	Recommendation T.38 Annex protocol, TCP, UDP/IP communication
Compatible machines:	IP-Fax compatible machines
IP-Fax transmission function:	Specify IP address and send fax to an IP-Fax compatible fax through a network. Also capable of sending fax to G3 fax connected to the public telephone lines via a VoIP gateway.
IP-Fax reception function:	Receive a fax sent from an IP-Fax compatible fax through a network. Also capable of receiving fax from a G3 fax connected to the public telephone lines via a VoIP gateway.

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Printer Option Features

• General Features

CPU			RM7065C-600MHz
RAM	Std.		1,024MB*1
Hard Disk Drive	Std.		80GB*1 (40GBx2)
PDL	Std.		Standard: RPCS, PCL5c, PCL6
	Option		Adobe PostScript3
Print Resolution	Max.		1200 x 1200 dpi 1800 x 600 dpi equivalent (=600 x 600 dpi /2bit)
	Selectable printing modes of driver	PCL5c	300 x 300 dpi (available only with B/W mode) 600 x 600 dpi
		PCL6	600 x 600 dpi, 1200 x 1200 dpi
		RPCS	300 x 300 dpi, 600 x 600 dpi, 1200 x 1200 dpi 1800 x 600 dpi (=600 x 600 dpi / 2 bit)
		PS3 (option)	600 x 600 dpi, 1200 x 1200 dpi
	Max.		1200 x 1200 (dpi)
Fonts	Std.		PCL: 46 fonts (TrueType: 10 fonts, Intellifonts 35 fonts, 1 bitmap font)
	Option		PS3: 136 Adobe PostScript Type 1 fonts
Connectivity	Host Interface	Std.	Ethernet (RJ-45:100BASE-TX/10BASE-T) USB2.0
		Option	IEEE1284, Wireless LAN Interface (IEEE802.11b), Bluetooth, IEEE1394 Note: Only one of above option can be installed
	Network Protocol		TCP/IP, IPX/SPX, SMB, AppleTalk (Auto Switching)
	DDNS support	Related protocol	TCP/IP
		Support server	See DDNS note below
	MIB support	Private MIB	RICOH original
		Standard MIB (SMNP Printer MIB)	MIB-II(RFC1213), HostResource(RFC1514), PrinterMib(RFC1759)
	Network/Operating Systems		Windows 95/98SE/ME/NT/2000/XP/Server 2003
			Netware 3.12, 3.2, 4.1, 4.11, 5.0, 5.1, 6
			Unix; Sun Solaris, HP-UX, SCO OpenServer, RedHat Linux, IBM AIX
			Mac OS 8.6-9.2x, OS X 10.1 or later

*1: Shared with other Features. (Copy, Fax, Scanner)

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[DDNS (Dynamic Domain Name System) Support]

How it works

Records (**) managed by DNS server will be dynamically renewed.

Without DDNS, manual renewal of records required when DNS client's IP address is changed.

(**) Records are two type of mapping information as follows;

1. "A" record for host name to IP address
2. "PTR" record for IP address to host name.

Customer benefits

Under conventional DNS function, name resolution does not work with following cases.

1. Change of IP address for MFP
2. Change of Device Name for MFP

However, with DDNS function, above change will be automatically notified to DNS server, name resolution work even after these changes.

Support Server

1.DNS server

1. Static IP setting
 - "Microsoft DNS Server" of Windows 2000 Server
 - BIND 8.2.3 later
2. DHCP setting
 - In case of renewal of "A" record by MFP
 - "Microsoft DNS Server" of Windows 2000 Server
 - BIND 8.2.3 later
 - In case of renewal of "A" record by DHCP
 - "Microsoft DNS Server" of Windows 2000 Server
 - BIND 8.2.3 later
 - Standard DNS Server attached with NetWare 5 later

2.DHCP Server that can renew "A" record instead of MFP

- Microsoft DHCP Server of Windows 2000 Server SP3 later
- ISC DHCP 3.0 later
- Standard DHCP Server attached with NetWare 5 later

Scanner Option Features

• General Features

Optical Resolution:	100 / 200 / 300 / 400 / 600dpi Default = 200dpi
Scan Speed:	Scan to E-mail / Folder: BW: 50pages/minute (A4LEF / BW Text(Print) / 200dpi / Compression: On (MH)) FC: 35pages/minute (A4LEF / FC Text / Photo / 200dpi / Compression: Standard) Network TWAIN Scan: BW: 36pages/minute (A4LEF / Quality: Colors / Binary / 200dpi / Compression: Data compression(MMR)) FC: 20pages/minute (A4LEF / Quality: Colors / 16770K colors / 200dpi / Compression: Standard quality)

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Auto scan size detection:	US model	Contact Glass	11"x17"(DLT) SEF, 8 ½"x14"(LG) SEF, 8 ½"x11"(LT) LEF/SEF,
		ARDF	11"x17" (DLT)SEF, 8 ½"x14" (LG)SEF, 8 ½"x11"(LT) LEF/SEF, 5 ½"x8 ½" (HLT)LEF/SEF, 10"x14"SEF, 11"x15"SEF (detected the same as DLT SEF, Default = DLT SEF), 8"x13"SEF (detected the same as LG SEF, Default = LG SEF), 10"x8"SEF (detected the same as LT SEF, Default = LT SEF)
	EU/Asia model	Contact Glass	A3 SEF, B4 SEF, A4 LEF/SEF, B5 LEF/SEF, 8 ½"x13"(Foolscap) SEF
		ARDF	A3 SEF, B4 SEF, A4 LEF/SEF, B5 LEF/SEF, A5 LEF/SEF, 8 ½"x13" (Foolscap)SEF, 8"x13"SEF (detected the same as Foolscap SEF, Default = Foolscap SEF)
Scan Area:		Main Scan: 297mm, Sub Scan: 432mm	
sRGB Support:		Option (With Optional File Format Converter)	
Network Topology:		Ethernet 10/100BaseTX, IEEE 1394/IP over, Wireless LAN(802.11b)	
Protocol:		Network: TCP/IP, Sending E-mail: SMTP, Scan to Folder: SMB, FTP	
Original Size:		Auto Select(Default), A3 SEF, B4 SEF, A4 LEF/SEF, B5 LEF/SEF, A5 LEF/SEF, 11"x17"(DLT) SEF, 8 ½"x14"(LG) SEF, 8 ½"x13"(Foolscap) SEF, 8 ½"x11"(LT) LEF/SEF, 5 ½"x8 ½"(HLT) LEF/SEF, Custom Size	
Compression Method:		BW: TIFF (MH, MR, MMR) Grayscale, Full color: JPEG	
Scan Mode:		Standard: BW Text, BW OCR, BW Text/Photo, BW Photo, BW Grayscale, FC Photo, FC Text Optional: ACS (With Optional File Format Converter)	
Image Density :		Auto Density Selection (Effective only in BW and Grayscale scan mode) Manual: 7 levels (Effective in BW/Grayscale and FC scan mode)	
Image Rotation:		Yes	
SADF / Batch Mode:		Yes (Default = SADF)	
Mixed Size Mode:		Yes	

*ForB202/B178/B180, ScanRouter V2 Lite is not bundled.

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- **Scan to Email**

Requirement:	SMTP (Mail Server) Gateway and TCP/IP	
Authorization function:	SMTP authentication POP before SMTP authentication	
Resolution:	100dpi, 200dpi (Default), 300dpi, 400dpi, 600dpi	
Register E-mail address in HDD:	Max. 2,000 addresses	
Register Group address in HDD:	Max. 100 Group (Max. 500 addresses in one group address)	
Maintain E-mail address in HDD:	Direct input on operation panel, WebImageMonitor, SmartNetMonitor	
Destination E-mail address input via soft key:	Yes, Max. 65 destinations per job	
Search E-mail address in HDD:	By name and E-mail address	
LDAP:	Yes (Please see 3-2-5. for LDAP specification)	
Max. address numbers per send:	Max. 500 addresses per send *1	
Address numbers per send:	Address from HDD address book *1	Max. 500
	Address directly input via soft key *1 *2	Max. 100
	Address looked up via LDAP *1 *2	Max. 100
Attention:	to, cc, bcc	
Subject:	Manual Input	Max. 128 Characters via soft key
	Pre-register by user	22 subjects Max. 20 Characters per a subject
Body Message:	Manual Input	Max. 80 Characters via soft key
	Pre-register by user	5 body messages. 80 characters x 5 lines per a body message Title name of the body message: Max. 20 characters per a name
	Preset	Message: "This e-mail included attached file sent from xxxx(machine model name)."
E-mail Size (with restriction):	64 - 102,400KB, Default = 2,048KB	
E-mail Size (w/o restriction):	725MB	
File type:	Single Page TIFF/JPEG, Single Page PDF, Multi Page TIFF, Multi Page PDF	
Program User Setting:	Yes (up to 10 programs)	
Divide and send e-mail:	Yes (By page or size) / No, Default = Yes(By size) *3	
Resend:	Yes / No, Default = Yes	

*1: Address from HDD address book + Address input via soft key + Address looked up via LDAP = Max.500.

*2: Address directly input via soft key + Address looked up via LDAP = Max. 100.

*3: If the sent file size exceeded the maximum E-mail size, it would be divided to multiple sending. In addition, the sent files might not be accepted by the receiving side due to the limitation in the receiving capacity at the receiver SMTP server or E-mail software setting.

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- **Scan to Folder**

Protocol Support:	SMB (Server Message Block), FTP (File Transfer Protocol)
Security:	Client folder log-in (log-in name and password) Encryption of log-in name and password during transmission
Resolution:	100dpi, 200dpi (Default), 300dpi, 400dpi, 600dpi
Register client folder address in HDD:	Max. 2,000 folders
Maintain client folder address in HDD:	Direct input on operation panel, WebImageMonitor, SmartNetMonitor
Destination client folder address input via soft key:	Yes SMB: Network path -> Client folder -> Password FTB: Server -> Network path -> User account -> Password
Search client folder:	SMB: Browsing directly to the designated folders FTP: By client folder name
Max. client folder numbers per send:	Max. 50 client folders / PCs per send
Destination Combination:	Please refer to 10-4-4.
Group address:	Max. 100 destinations (To Folder: 50, To E-mail: 100) (*1) e.g. 100 destinations 50 folders included >>>OK 100 destinations 51 folders included>>>Failure
Input Subject:	No
Scan File Size:	No limitation (Depends on PC HDD and memory.)
File Size when combined Scan to Folder & Scan to E-mail:	64 - 102,400kB, Default = 2,048KB (With restriction) 725MB (Without restriction) (Scan to E-mail file size applied).
File type:	Single Page TIFF/JPEG, Single Page PDF, Multi Page TIFF, Multi Page PDF
Program User Setting:	Yes (up to 10 programs)
Dividing file in Scan to E-mail:	Yes (By page or size) / No, Default = Yes(By size) (When Scan to PC combine with Scan to E-mail)
Resend:	Yes / No, Default = Yes

(*1) User can send to Max. 100 destinations in the same group. But the number of folders has to be less than 50, since Max. folder destinations are 50. If there are more than 50 folder destinations registered in the Group address, a message pops up.

- **Network Twain Driver**

OS:	Windows 95, 98/98SE, ME Windows NT Server4.0 (SP5 or later), 2000Server Windows XP
Resolution:	100 – 1200dpi (Black and White / Grayscale) 100 – 600dpi (Full Color)
Scan Mode:	Standard / Photo / OCR / Filing
Image Adjustment:	Brightness / Contrast / Threshold /Gamma Adjustment / Halftone Pattern
Stamp:	Date / Page Number / Text
Endorse:	Supported

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General Main Frame Features

Configuration:	Desk Top	
Original scanning:	One-dimensional solid scanning through CCD	
Copy process:	Dry electrostatic transfer system	
Development:	Dry two-component magnetic brush development system	
Fusing:	Heating roll pressure system	
Original Type:	Sheet / Book / Object	
Original Size:	Max: 11"x17"(DLT) / A3	
Thickness of Original:	Less than 30mm / Less than 5kg	
Scan Resolution:	600dpi / 256gradations	
Copy/Print Resolution:	Copy: 600dpi / 2bit, Print: 600x600 / 2bit, 600x600, 1,200x1,200dpi / 1bit	
Max Image-able Area:	12"x18" / 297x432mm	
Paper Weight:	Standard Tray	16-28lbs / 60-105 g/m ²
	<u>Bypass Tray</u>	16-43lbs / 60-163 g/m ²
	Paper Bank	16-28lbs / 60-105 g/m ²
	Duplex Unit	16-28lbs / 60-105 g/m ²
Copy Speed: (ADF, 1 to 1)	<u>B202</u>	FC: 24cpm / BW:28cpm(LT/A4 LEF) FC:13.5cpm / BW: 16cpm (DLT/A3 SEF) OHP/Thick Paper: 14cpm (LT/A4 LEF, FC/BW)
	B178	FC: 28cpm / BW: 35cpm (LT/A4 LEF) FC:13.5cpm / BW: 16cpm (DLT/A3 SEF) OHP/Thick Paper: 14cpm (LT/A4 LEF, FC/BW)
	B180	FC: 35cpm / BW: 45cpm (LT/A4 LEF) FC:16cpm / BW: 19.5cpm (DLT/A3 SEF) OHP/Thick Paper: 14cpm (LT/A4 LEF, FC/BW)

Utility Software

Software	Description
Font Manager (Win95/98/ME, NT4, 2000, XP, Server 2003):	<ul style="list-style-type: none"> The Font Manager 2000 installs the screen fonts in your Windows 95/98/Me/NT 4.0/2000/XP/Server 2003. Installing the screen fonts for the printer fonts improves the WYSIWYG quality. A utility for administrators who need to manage and monitor printers over the network. The Smart Device Monitor for Admin for Windows 95/98/Me/NT 4.0/2000/XP/Server 2003
Smart Device Monitor for Admin:	<ul style="list-style-type: none"> Setup utilities are also available. Our device monitoring software has been renamed from Smart Net Monitor to Smart Device Monitor. Operation of Smart Device Monitor is the same as SmartNetMonitor. In case you already have SmartNetMonitor installed in your PC overwrite it with Smart Device Monitor, software settings and log data will be carried over.

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Software	Description
Smart Net Monitor for Client (Win95/98/ME, NT4, 2000, XP, Server 2003)	<ul style="list-style-type: none"> A utility enables you to access networked printers to print, to monitor and to receive notices without a server. This utility also enables the following features: Recovery Printing Parallel Printing Our device monitoring software has been renamed from SmartNetMonitor to SmartDeviceMonitor. Operation of Smart Device Monitor is the same as Smart Device Monitor. In case you already have SmartNetMonitor installed in your PC overwrite it with Smart Device Monitor, software settings and log data will be carried over.
Device Graphic Update Module	<ul style="list-style-type: none"> Device Graphic Update Module provides bitmap images used to represent the various statuses of devices graphically within Smart Device Monitor or Web Smart Device Monitor.
DeskTop Binder	<ul style="list-style-type: none"> DTB enables you to connect a client computer to an I/O device. You can efficiently input, edit, and output the data on your computer.
Printer Utility for Mac	<ul style="list-style-type: none"> This is a utility for Macintosh that provides access to several network printing administrative features. PPD for Mac
PS Descriptions	<ul style="list-style-type: none"> By interacting with the Adobe PostScript 3 controller in the device, this PPD is able to produce an accurate representation of the screen image.
IEEE 1394 Printer Removal Utility	<ul style="list-style-type: none"> This utility completely removes all printers connected via IEEE 1394 interface from your Windows 2000/XP/Server 2003 system. This will prepare your Windows 2000/XP/Server 2003 system for the proper reinstallation of IEEE 1394 printers.
PPD Installer	<ul style="list-style-type: none"> This PPD installer is used to install a PPD (Postscript Printer Description) file on Mac OSX. PPD files contain descriptions of printer capabilities such as paper sizes, number of input trays and duplexing. Once the PPD file is installed on the system using the PPD installer, the PS driver that comes bundled with Mac OS X can use the information in the PPD to control the print device and enable full functionality. Please see the ReadMe file for information about compatibility with versions of Mac OS X.
LAN FAX Driver	<ul style="list-style-type: none"> This software enables you to fax documents directly from your computer. The Address Book Editor and Cover Sheet Editor are installed as well. This software requires the optional fax unit to be installed on the machine.
RPCS Driver	<ul style="list-style-type: none"> The RPCS printer drivers provide high productivity and simple operation.
PCL 6 Driver	<ul style="list-style-type: none"> The PCL 6 printer drivers provide faster printing and better what-you-see-is-what-you-get (WYSIWYG) than PCL 5c drivers.
PCL 5c Driver	<ul style="list-style-type: none"> The PCL 5c printer drivers are the recommended printer drivers for this printer. The PCL 5c printer drivers are recommended for users who need compatibility with PCL 5c printer.
Post Script Driver	<ul style="list-style-type: none"> The PostScript printer drivers generate PostScript commands.
USB Print	<ul style="list-style-type: none"> The USB Printing Support provides the solution for USB printing under Windows 98SE/Me. Windows will prompt for these support modules after it recognizes the printer on an USB port for the first time.
ICM Profiles	<ul style="list-style-type: none"> The ICM profiles work under Windows 98/Me/2000/XP/Server2003.
Network TWAIN Driver	<ul style="list-style-type: none"> TWAIN scanner driver for network connections.
Microsoft Windows NT 4.0 Terminal Server Edition PCL 5c Driver	<ul style="list-style-type: none"> Printer driver for color printing in Windows. It supports HP PCL 5c commands. Basically, this is the same driver as PCL5e with color

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Software	Description
Microsoft Windows NT 4.0 Terminal Server Edition PS Driver	<ul style="list-style-type: none"> printing functionality added. By interacting with the Adobe PostScript 3 controller in the device, this driver is able to produce an accurate representation of the screen image.
Microsoft Windows 2000 Terminal Services PCL 5c	<ul style="list-style-type: none"> Printer driver for color printing in Windows. It supports HP PCL 5c commands. Basically, this is the same driver as PCL5e with color printing functionality added.
Microsoft Windows 2000 Terminal Services	<ul style="list-style-type: none"> By interacting with the Adobe PostScript 3 controller in the device, this driver is able to produce an accurate representation of the screen image.

Total Counter Access

- User Tools / Counter → Counter
- User Tools / Counters → System Settings → Key Operator → Tools Display / Print Counter

Counter Style

Development Count (Default):

Application	Mode		BK counter	CMY counter
Copy	ACS	Sensed as Color	+ 1	+ 3
		Sensed as BW	+ 1	
	Full Color		+ 1	+ 3
	B&W		+ 1	
	Single Color	Basic Color	Same as the number of toner(s) which is (are) actually used *	
		User Color	+ 1	+ 3
	Two Color	Basic Color	Same as the number of toner(s) which is (are) actually used *	
		User Color	+ 1	+ 3
Print	Color	Sensed as Color	+ 1	+ 3
		Sensed as BW	+ 1	
	B&W		+ 1	
FAX	Black		+ 1	

* How to count up Basic Color in Single Color / Two Color mode

Toner(s) which is (are) actually used	BK counter	CMY counter
BK + one of CMY	+ 1	+ 1
BK + two of CMY	+ 1	+ 2
BK + C + M + Y	+ 1	+ 3
One of CMY		+ 1
Two of CMY		+ 2
C + M + Y		+ 3

Copy / Print Count:

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Application	Mode		FC Copy Ctr.	BK Copy Ctr.	FC Print Ctr.	BK Print Ctr.	FC Total Ctr.	BK Total Ctr.
Copy	ACS	Sensed as Color	+ 1				+ 1	
		Sensed as BW		+ 1				+ 1
	Full Color		+ 1				+ 1	
	B&W			+ 1				+ 1
	Single Color		+ 1				+ 1	
	Two Color		+ 1				+ 1	
Print	Color	Sensed as Color			+ 1		+ 1	
		Sensed as BW				+ 1		+ 1
	B&W					+ 1		+ 1
FAX	Black					+ 1		+ 1

Special Cases:

The counter **doesn't** click in below cases:

Mode	Situation	Remarks
OHP Slip Sheet	OHP blank slip sheet	
Cover Sheet Mode	Copying / Printing blank cover sheet	
SP Mode	Printing from SP mode	Not to charge customers for prints made by service engineers.
Auto Color Calibration	Printing ACC test pattern	

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Installation Requirements

1. Temperature Range: 10°C to 32°C (50°F to 89.6°F)
2. Humidity Range: 15% to 80% RH
3. Ambient Illumination: Less than 1,500 lux (do not expose to direct sunlight)
4. Ventilation: 3 times/hr/person or more
5. Do not exposed the machine to the following:
 - a. Cool air from an air conditioner
 - b. Heat from a heater
6. Do not install the machine in areas that are exposed to corrosive gas.
7. Install the machine at locations lower than 2,500 m (8,200 ft.) above sea level.
8. Install the machine on a strong, level base. (Inclination on any side must be no more than 5 mm.)
9. Do not install the machine in areas that get strong vibrations.

MACHINE LEVEL

Front to back: Within 5 mm (0.2")

Right to left: Within 5 mm (0.2")

Power Requirements

- Input voltage level: 120 V, 60Hz: More than 10 A
- Permissible voltage fluctuation: ±10%
- Do not place anything on power cord.
- The required wall outlet is a NEMA 5-15R (receptacle)



Installation Times

MAINFRAME: 30 minutes

PERIPHERALS:

Paper Bank/LCT: 15 minutes
 Multi-bin Tray: 10 minutes
 2 Tray Finisher: 15 minutes

IEEE 1394: 5 minutes
 Blue tooth: 5 minutes
 Data Overwrite: 10 minutes
 Security Unit:
 Punch Kit 15 minutes

Fax: 15 minutes
 Booklet Finisher: 15 minutes
 File Format Converter: 10 minutes
 IEEE 802.11b: 5 minutes
 IEEE 1284: 5 minutes
 Accessibility Scanner Option: 30 minutes

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Foot Print

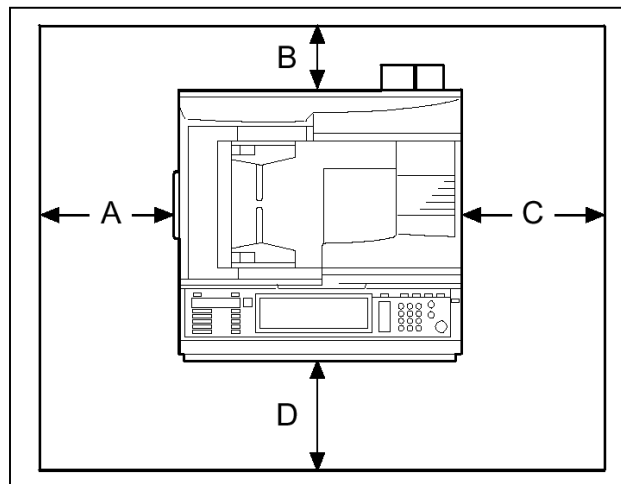
(W x D)

- Main Frame 26.4" X 27.5"
- 2 Tray Finisher 26.8" X 24.4" (Note 1)
- Booklet Finisher 27.4" X 23.7" (Note 1)

Notes

- Finishers attach to left side of machine (reference Machine Space Requirements side "A")
- Note 1 – An additional 16.6" is required to allow the finisher to moved away from the mainframe to clear a jam condition.

Machine Space Requirements



A:	At least 3.9 inches
B:	At least 3.9 inches
C:	At least 22 inches
D:	At least 29.6 inches

Dimensions (W x D x H):	26.4" x 27.5" x 33.8"
Weight:	Less than 265lbs

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PM Table

Mainframe: B202/B178/B180

Unit	Parts No.	Description	Q'ty /Unit	PM Interval B178-B180/B202	Unique or Common
Development Unit	B1803005	Development Unit - K	1	60KP / 52KP	U
	B1803006	Development Unit - C	1	60KP / 52KP	U
	B1803007	Development Unit - M	1	60KP / 52KP	U
	B1803008	Development Unit - Y	1	60KP / 52KP	U
PCU	B1809510	PCU	1	60KP / 52KP	U
Fusing Unit	AE020155	Pressure Roller	1	120KP / 104KP	U
	AE010055	Fusing Roller	1	120KP / 104KP	U
	B1804107	Heat Roller	1	120KP / 104KP	U
	AE042080	Pressure Cleaning Roller	1	60KP / 52KP	U
	AE040042	Oil Supply Roller	1	60KP / 52KP	U
	B1804101	Fusing Belt	1	60KP / 52KP	U
	B1804211	Pick-off Pawl Ass'y	1	60KP / 52KP	U
Other	AF031049	Feed Roller	2	150KP / 130KP	C (B147)
	AF030049	Pick up Roller	2	150KP / 130KP	C (B147)
	AF032049	Separation Roller	2	150KP / 130KP	C (B147)
	G0603600	Waste Toner Bottle (note 1)	1	60KP / 52KP	C (B147)
	GA012000	Upper Dust Filter	1	120KP / 104KP	C (B147)
	GA012001	Lower Dust Filter	1	120KP / 104KP	C (B147)

NOTE 1: These items are also provided as maintenance kits and are user replaceable.

NOTE 2: The yields figures in the above table are based on the following conditions:

- A4 (LT) long edge feed
- 5% image coverage ratio
- Color ratio: 30%

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Auto Reverse Document Feeder: B714

Part Number	Description	Q'ty /Unit	PM Interval (Originals)	Unique or Common
B3512222	Paper Feed Belt	1	80 / 69KP	C (B147)
A8592241	Reverse Roller	1	80 / 69KP	C (B147)
B3512126	Pick-up Roller	1	80 / 69KP	C (B147)

Paper Tray Unit: B601

Part Number	Description	Q'ty /Unit	PM Interval	Unique or Common
AF031049	Feed Roller	2	150 / 130 KP	C (B147)
AF030049	Pick-up Roller	2	150 / 130 KP	C (B147)
AF032049	Separation Roller	2	150 / 130 KP	C (B147)

Paper Tray Unit: B598

Part Number	Description	Q'ty /Unit	PM Interval	Unique or Common
AF031049	Feed Roller	2	150 / 130 KP	C (B147)
AF030049	Pick-up Roller	2	150 / 130 KP	C (B147)
AF032049	Separation Roller	2	150 / 130 KP	C (B147)

LCT: B600

Part Number	Description	Q'ty /Unit	PM Interval	Unique or Common
AF031049	Feed Roller	2	150 / 130 KP	C (B147)
AF030049	Pick-up Roller	2	150 / 130 KP	C (B147)
AF032049	Separation Roller	2	150 / 130 KP	C (B147)

Others

Part Number	Description	Q'ty /Unit	PM Interval	Unique or Common
B1803810	Transfer Unit (note 1)	1	1000KP	U
B1803830	Transfer Cleaning Unit (note 1)	1	250KP	U
AF031046	Bypass Feed Roller (note 2)	1	150KP	C (B147)
AF030049	Bypass Pick up Roller (note 2)	1	150KP	C (B147)
AF032046	Bypass Separation Roller (note 2)	1	150KP	C (B147)

Note 1: These units are considered EM parts since their expected life are relatively long.

Note 2: The actual life of the rollers depends on the usage of the bypass tray. Therefore, the bypass feed rollers are treated as EM parts.

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Contact Information

Name	Contact
Technical Services Call Center (Hotline)	Ricoh: 1-800-537-4264 Savin/Gestetner: 1-800-291-6044 Lanier: 800-333-3147
Application Help Desk (Software Issues)	Ricoh Phone Card: 2 Call - 000781MIU, 5 Call - 000900MIU Savin Phone Card: 2 Call - 12992, 5 Call - 12993 Gestetner Phone Card: 2 Call - 12994, 5 Call - 12995
National Reclamation Center	(800) 557-4264 / http://www.nrc-usa.com
Technology Solutions Center Web Site	http://tsc.ricohcorp.com
Ricoh Web Site	http://www.ricoh-usa.com/
Savin iLINC Web Site	http://w3.savin.com
Gestetner ILINE Web Site	http://W3.gestetnerusa.com
Lanier Web Site	http://www.lanier.com
Headquarter Web Sites	Ricoh Corporation: http://www.ricoh-usa.com Savin Corporation: http://www.savin.com Gestetner Corporation: http://www.gestetnerusa.com/
Fax On Demand	(973) 808-3590
Material Safety Data Sheets	1-800-336-MSDS (6737)
Eastern Training Center	(973) 808-7646
Western Training Center	(714) 566-3692
Southern Training Center	(770) 840-4835
Lanier Education Center	(678)-824-3000

Special Tools

U: Unique for this model
C: Common with listed model

Item	Part Number	Description	Q'ty	Unique or Common
1	B6455010	SD Card	1	C (General)
2	B6456700	PCMCIA Card Adapter	1	C (General)
3	B6456800	USB Reader/Writer	1	C (General)
4	VSSM9000	Digital Multimeter – FLUKE87	1	C (General)
5	A2579300	Grease Barrierta – S552R	1	C (General)
6	A0929503	C4 Color Test Chart (3 pcs/set)	1	C (General)
7	C4019503	Magnification Scope	1	C (General)
8	A0069104	Scanner Positioning Pin (4pcs/set)	1	C (General)
9	G0219350	Loop Back Connector (Note)	1	C (General)
10	G5885140	Plug - IEEE1284 Type C (Note)	1	C (General)
11	52039501	Silicon Grease G-501	1	C (General)

NOTE: Loop-back Connector (item 9) requires Plug - IEEE1284 Type C (item 10).

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Product Order Numbers

Product Code	EDP Code	Lanier ID	Item	Model Name
B202	002284MIU	216-1215	FC: 24cpm / BW:28cpm (Note 1)	RICOH Aficio 3228C Savin C2824 Gestetner DSc428 Lanier LD328c
B178	002285MIU	216-1216	FC: 28cpm / BW: 35cpm (Note 1)	RICOH Aficio 3235C Savin C3528 Gestetner DSc435 Lanier LD335c
B180	002286MIU	216-1217	FC: 35cpm / BW: 45cpm (Note 1)	RICOH Aficio 3245C Savin C4535 Gestetner DSc445 Lanier LD345c
B202	002405MIU	N/A	FC: 24cpm / BW:28cpm (Note 2)	RICOH Aficio 3228C SPF Savin C2824spf Gestetner DSc428spf Lanier – N/A (Ricoh Family Group US only)
B178	002411MIU	N/A	FC: 28cpm / BW: 35cpm (Note 2)	RICOH Aficio 3235C SPF Savin C3528spf Gestetner DSc435spf Lanier – N/A (Ricoh Family Group US only)
B180	002412MIU	N/A	FC: 35cpm / BW: 45cpm (Note 2)	RICOH Aficio 3245C SPF Savin C4535spf Gestetner DSc445spf Lanier – N/A (Ricoh Family Group US only)

Notes

1. Comes standard with: Mainframe, ARDF, 2 x 500 Sheet Paper Trays, Duplex, Bypass Tray, Scan/Print Kit, 1GB RAM & 80 GB HDD.
2. Includes Fax Option Type 3245.

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Product Order Numbers cont.

Product Code	EDP Code	Lanier ID	Item	Model Name	Common / Unique
B714	412130	N/A	ARDF	DF82	U
B601	412132	216-7085	1 Tray Paper Bank	PS580	U
B598	412134	216-7086	2 Tray Paper Bank	PS590	U
B600	412136	216-7087	LCT (2000 sheets)	PS600	U
FAC28	402373	481-0878	Cabinet	FAC28	C (B147/B149)
B599	412139	216-1218	Multi Tray Finisher	SR960	U
B602	412143	216-1219	Booklet Finisher	SR950	U
B712	412510	216-7088	Fax Option	Fax Option Type 3245	U
B713	412149	216-7089	G3 Fax Option	G3 Interface Unit Type 3245	U
	412151	216-7090	PostScript 3	PostScript 3 Unit Type 3245	U
	412152	216-7093	HDD Data Overwrite Security Unit	Type D	U
G570	412153	216-1220	Scanner Accessibility Option	Type 3245	U
	400571	481-0334	Platen Cover		C (B147/B149)
	400568	481-0335	Multi-bin Tray	PT460	C (B147/B149)
	410785	481-0319	Punch Unit for Multi Tray Finisher	Punch Kit Type 1045 NA	C (B147/B149)
	411585	216-7062	Punch Unit for Booklet Finisher	Punch Kit Type 2238 US	C (B147/B149)
	001342MIU	481-0174	Fax SAF Memory	Memory Unit Type B 32MB	C (B147/B149)
	410781	481-0393	Fax Hand Set	Handset Type 1018	C (B147/B149)
	411699	481-0786	IEEE 1284	Type A	C (B121/B122)
	411264	481-0683	IEEE 1394	Interface Board Type B	C (B147/B149)
	402378	481-0907	Wireless LAN Option	Interface Unit Type H	C (G104)
	412178	216-7092	Bluetooth Option	Interface Unit Type 3245	C (G104)
	411400	481-0679	MLB2 (File Format Converter)	File Format Converter Type B	C (B147/B149)
	410126	481-0105	Key Counter Bracket	Key Counter Bracket Type H	C (B147/B149)

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Supply Order Numbers / Yields

Item	EDP Code	Name	Target Yield	Content
Gestetner				
Black	85460	Gestetner DSc445 Toner Black	24K output / Cartridge	
Yellow	85463	Gestetner DSc445 Toner Yellow	10K Output / Cartridge	
Magenta	85462	Gestetner DSc445 Toner Magenta	10K Output / Cartridge	
Cyan	85461	Gestetner DSc445 Toner Cyan	10K Output / Cartridge	
Staple Set Cartridge for SR960	410805	Gestetner Staple Type K		5K x 1 /carton
Staple Refill Cartridge for SR960	410806	Gestetner Refill Staple Type K		5K x 3 /carton
Staple set for SR950	411731	Gestetner Staple Type P		5K x 1 /carton
Marker Fax Stamp 30	1600089	Gestetner Marker Fax Stamp 30		1 carton of 4 markers
Waste Toner Bottle	400662	Gestetner Maintenance Kit Type E		B202 –52K B178/B180 – 60k
Lanier				
Black	480-0285	Lanier Black Toner for LD328c/LD335c/LD345c	24K output / Cartridge	
Yellow	480-0288	Lanier Yellow Toner for LD328c/LD335c/LD345c	10K Output / Cartridge	
Magenta	480-0287	Lanier Magenta Toner for LD328c/LD335c/LD345c	10K Output / Cartridge	
Cyan	480-0286	Lanier Cyan Toner for LD328c/LD335c/LD345c	10K Output / Cartridge	
Staple Set Cartridge for SR960	480-0062	Lanier Staple Type K		5K x 1 /carton
Staple Refill Cartridge for SR960	480-0063	Lanier Refill Staple Type K		5K x 3 /carton
Staple set for SR950	480-0215	Lanier Staple Type P		5K x 1 /carton
Marker Fax Stamp 30	481-0483	Lanier Marker Fax Stamp 30		1 carton of 4 markers
Waste Toner Bottle	400662	Lanier Maintenance Kit Type E		B202 –52K B178/B180 – 60k

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Ricoh				
Black	888340	Ricoh Toner Type R1 Black	24K output / Cartridge	
Yellow	888341	Ricoh Toner Type R1 Yellow	10K Output / Cartridge	
Magenta	888342	Ricoh Toner Type R1 Magenta	10K Output / Cartridge	
Cyan	888343	Ricoh Toner Type R1 Cyan	10K Output / Cartridge	
Staple Set Cartridge for SR960	410801	Ricoh Staple Type K		5K x 1 /carton
Staple Refill Cartridge for SR960	410802	Ricoh Refill Staple Type K		5K x 3 /carton
Staple set for SR950	411730	Ricoh Staple Type P		5K x 1 /carton
Marker Fax Stamp 30	334049	Ricoh Marker Fax Stamp 30		1 carton of 4 markers
Waste Toner Bottle	400662	Ricoh Maintenance Kit Type E		B202 –52K B178/B180 – 60k
Savin				
Black	5460	Savin Toner Type R1 Black	24K output / Cartridge	
Yellow	5463	Savin Toner Type R1 Yellow	10K Output / Cartridge	
Magenta	5462	Savin Toner Type R1 Magenta	10K Output / Cartridge	
Cyan	5461	Savin Toner Type R1 Cyan	10K Output / Cartridge	
Staple Set Cartridge for SR960	410803	Savin Staple Type K		5K x 1 /carton
Staple Refill Cartridge for SR960	410804	Savin Refill Staple Type K		5K x 3 /carton
Staple set for SR950	411733	Savin Staple Type P		5K x 1 /carton
Marker Fax Stamp 30	1600089	Savin Marker Fax Stamp 30		1 carton of 4 markers
Waste Toner Bottle	400662	Savin Maintenance Kit Type E		B202 –52K B178/B180 – 60k

- A4/LT, 5% chart is used to measure the above yield.

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Target Reliability

Item	B202	B178	B180
ACV (/month)	8K Prints 4K/4K FC/BW	10K Prints 5K/5K FC/BW	20K Prints 10K/10K FC/BW
Target Color Ratio (/month)	50%	50%	50%
Max CV Print by Color Ratio (/month)	50K Prints / 95KD FC = 25K Prints BW = 25K Prints	50K Prints / 95KD FC = 25K Prints BW = 25K Prints	50K Prints / 95KD. FC = 25K Prints BW = 25K Prints
PM Interval (*1)	52KP	60KP	60KP
Durability Color Ratio (*2)	50% to 70%	50% to 70%	50% to 70%

(1) PM Interval – PM Interval is based on component rotation. The B202 interval between sheets is longer resulting in the shorter PM cycle.

(2) Durability: References machine life and is unaffected by color ratio.

Initial Recommend Service Parts and PM Part List

Parts No.	Description	Q'ty /Unit	Remarks
AW100102	Thermistor : Fusing	1	Replace as necessary
B1804066	Thermostat :Fusing	1	Replace as necessary
AX430146	Fusing Lamp 200W	1	Replace as necessary
AX440231	Fusing Lamp 1100W	1	Replace as necessary
B1804246	Thermofuse Ass'y	1	Replace as necessary
AW100103	Thermistor : Pressure	1	Replace as necessary
B1785780	PCB B178 Controller	1	Replace as necessary
B1805780	PCB B180 Controller	1	Replace as necessary
B2025780	PCB B202 Controller	1	Replace as necessary
B1809590	HDD Ass'y	1	Replace as necessary
B1809590	NVRAM	1	Replace as necessary
B7365660	PCB Nic+USB Ass'y	1	Replace as necessary
B1805166	PCB IPU	1	Replace as necessary
B1805240	PCB MB	1	Replace as necessary
B1805051	PCB BCU	1	Replace as necessary
AZ320141	Power Pack CAC/DC:BDC	1	Replace as necessary
B1805130	PCB DRB	1	Replace as necessary
AZ240096	Power Supply	1	Replace as necessary

Service Information

Firmware Structure

Firmware SD Card	Firmware Type
System	System
Engine	BCU
LCDC	Operation Panel
FCU	Fax
Fax	Fax Application
IPU	IPU
Music	Music
NIB	NIB
Netfile	Netfile
PS	PostScript
Printer	Printer Application
Scanner	Scanner Application
WebDocbox	WebDocbox
Websys	Websys
Language	Optional Languages

Service Programs

New Unit Set

You must enable New Unit Set (SP5-999) before you replace these units:

- PCU-K (SP5-999-001)
- PCU-Y (SP5-999-002)
- PCU-M (SP5-999-003)
- PCU-C (SP5-999-004)
- Development Unit-K (SP5-999-005)
- Development Unit-Y (SP5-999-006)
- Development Unit-M (SP5-999-007)
- Development Unit-C (SP5-999-008)
- Fusing Unit (SP5-999-009)

Do this procedure to enable the New Unit Set program (and to replace a unit):

1. Start the SP mode (➡ 5.1.1).
2. Select a program from SP5-999-001 to 009.
3. Select "1. Enable."

Counter Reset

After you replace the following units, you reset the counter (SP7-804):

- By-pass tray (SP7-804-011)
- Tray 1 (SP7-804-012)
- Tray 2 (SP7-804-013)
- Tray 3/LCT (SP7-804-014)
- Tray 4 (SP7-804-015)
- Transfer unit (SP7-804-017)
- Transfer belt cleaning unit (SP7-804-018)

To enable the New Unit Set program (and to replace a unit), perform as follows:

1. Start the SP mode (➡ 5.1.1).
2. Select a program from SP7-804-011 to 018.
3. Select "EXECUTE."
4. Quit the SP mode.

When replacing the transfer belt unit or transfer belt.

- Set SP5995-020 to “ 0 ” –Execute SP5993-031 and SP5993-033
 - This measures the belt speed and stores the data.
- Execute SP5-995-27
 - This checks the belt regularity and stores the data.
- Execute SP5-995-25
 - This clears the speed control error counter

Branding

Branding is required as the machines are shipped as a generic version.

You must attach the model label (provided) to the front cover and verify the Plug and Play name with SP 5-907.

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Revisions:

Ver 1.0

Ver 1.1 (D) Updated Transfer belt unit part # page 21. Added ADF order #.
Added Recommended Paper Types.